Abstract

In this thesis we study properties of polyhedral risk measures. Polyhedral risk measures are defined as optimal values of certain linear stochastic programs. At first we consider polyhedral (one-period) risk measures and then generalization into the multiperiod case follows. Other well-known examples of risk measures are mentioned and it is showed which of them belong to the class of polyhedral risk measures. Furthermore optimization problems of portfolio selection for Value at Risk (VaR) and Conditional Value at Risk ($CVaR$) are proposed which simulates dynamic decision making of an investor. These problems are applied to financial data of stocks and solved in Wolfram Mathematica 9.